

# Overclocking on the Intel® Desktop Board D975XBX

The Intel® Desktop Board D975XBX is Intel's most feature-packed motherboard for PC enthusiasts. It introduces a number of options which make it possible for one to further push the capabilities of the latest Intel desktop processors, like the Intel® Core™2 Extreme Processor.

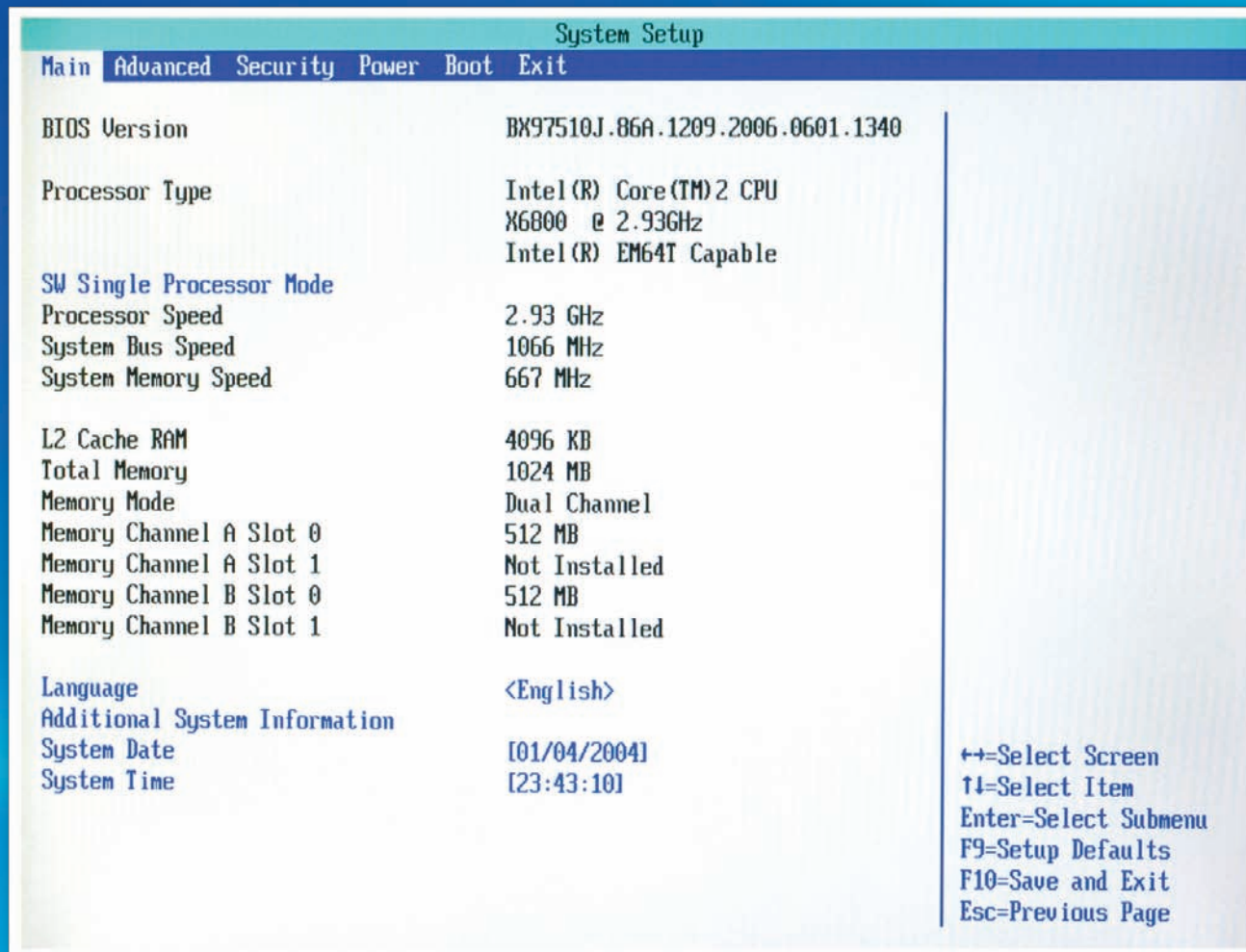
The Intel® Desktop Board D975XBX has a full array of overclocking features, such as a 50% FSB frequency override as well as various voltage adjustments for the processor, MCH as well as the Front Side Bus.

Before you start overclocking, please take note of the following precautions:

- 1 Not all processors and motherboards are created equal. One set of hardware may do better, or worse than another identical set.
- 2 More voltage for the memory and CPU usually helps, but too much voltage can be detrimental.
- 3 Provide adequate cooling for your hardware.

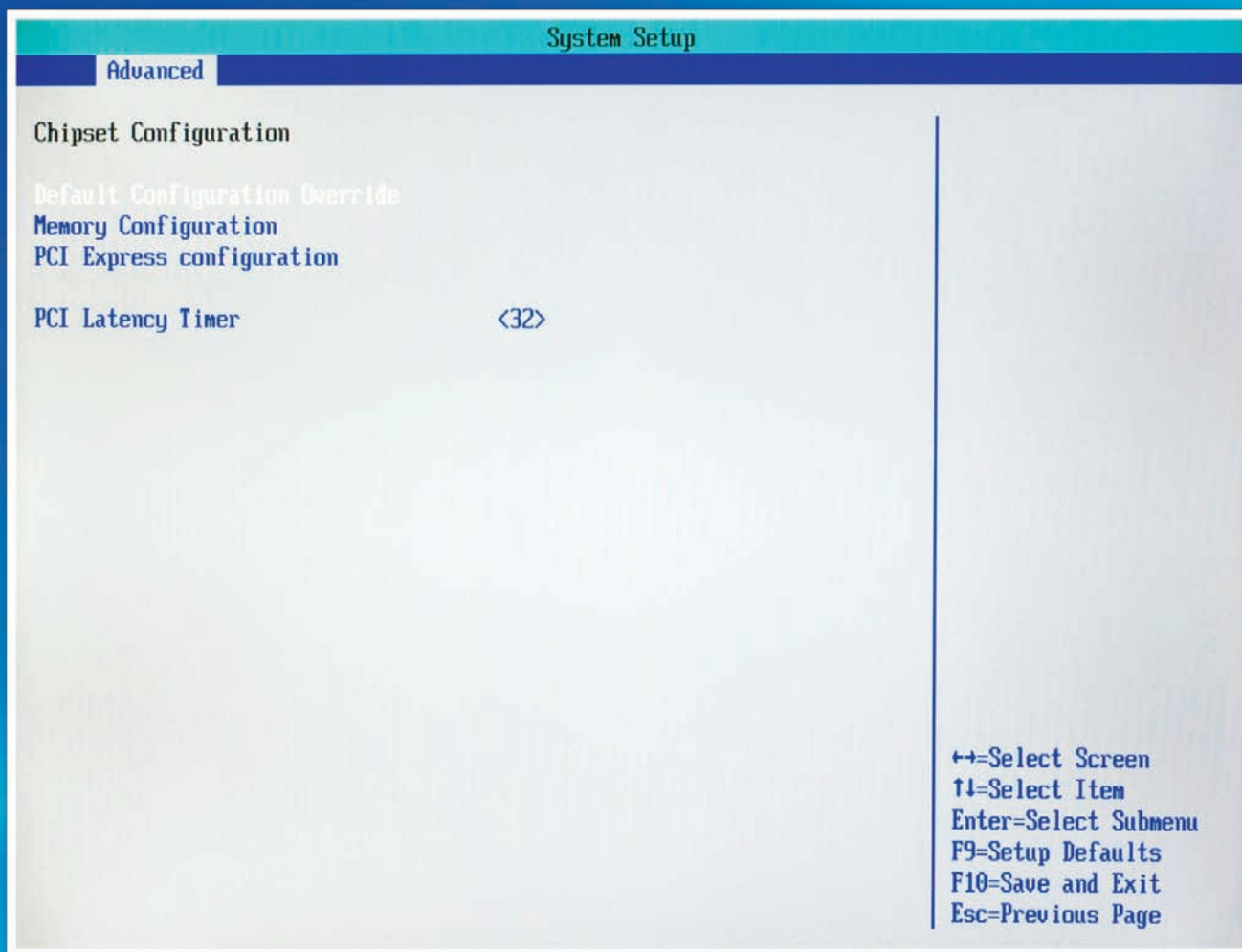
# PREPARING TO OVERCLOCK

- Enter the BIOS by hitting the 'F2' key during the POST portion of the initial boot sequence.
- Select the 'Advanced' menu, then 'Chipset Configuration'.



# PREPARING TO OVERCLOCK

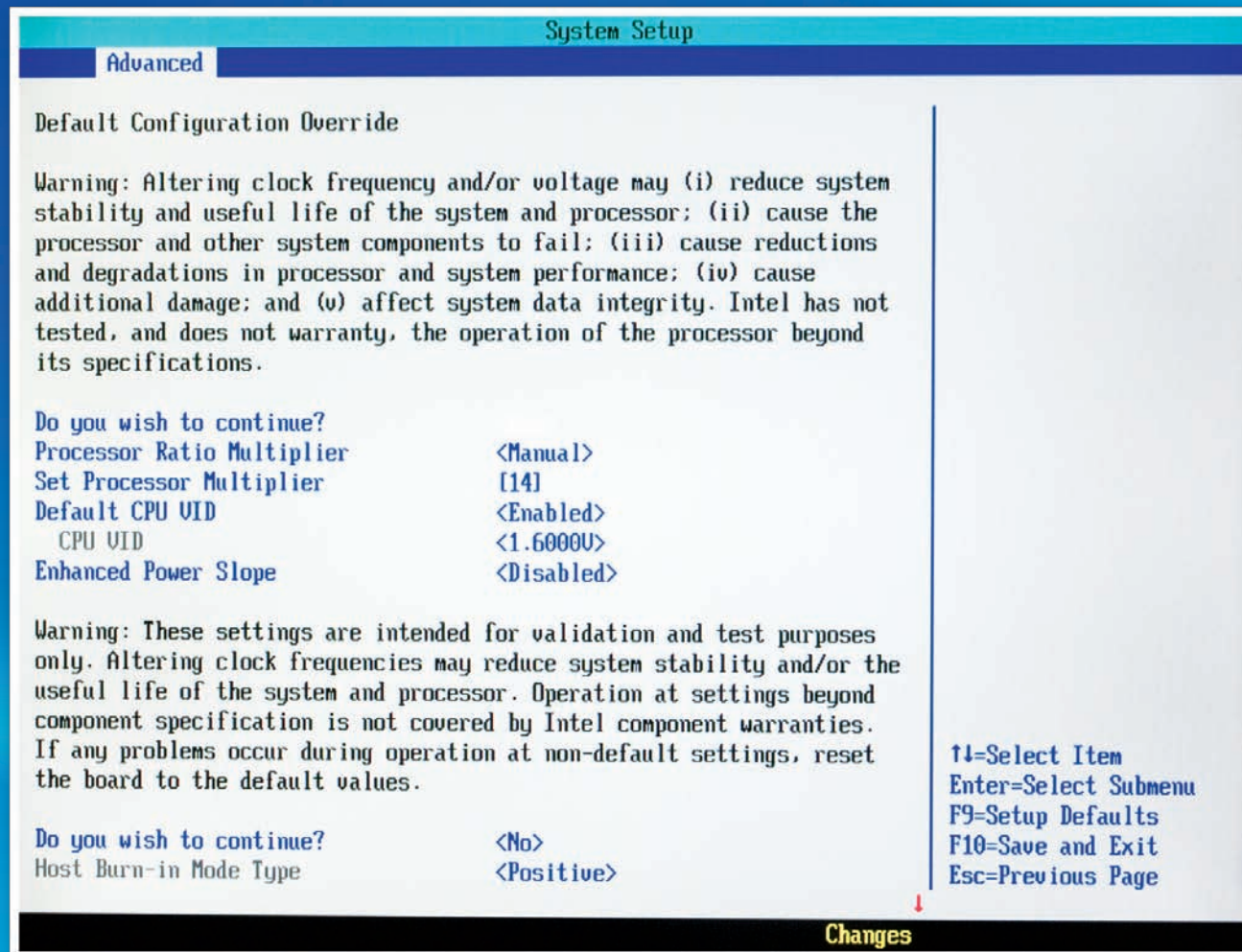
- Select 'Default Configuration Override'.





# PREPARING TO OVERCLOCK

- Set the first instance of 'Do you wish to continue' to 'Yes'.
- Set 'Processor Ratio Multiplier' to 'Manual'.
- Set the second instance of 'Do you wish to continue' to 'Yes'.



# OVERCLOCKING

System Setup

Advanced

↑

additional damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

Do you wish to continue?	<Yes>
Processor Ratio Multiplier	<Manual>
Set Processor Multiplier	[14]
Default CPU VID	<Enabled>
CPU VID	<1.6000V>
Enhanced Power Slope	<Disabled>

Warning: These settings are intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to the default values.

Do you wish to continue?	<Yes>
Host Burn-in Mode Type	<Positive>
Host Burn-in Mode Percentage	[0]
FSB Frequency Override	<Default>
PCI Burn-in Mode	<Default>
PCI Express Burn-in Mode	<Default>
MCH Voltage Override	<Default>
Front Side Bus Voltage Override	<Default>

↑↓=Select Item  
 Enter=Select Submenu  
 F9=Setup Defaults  
 F10=Save and Exit  
 Esc=Previous Page

Changes

## Basic **overclocking** options in this menu:

- 1 Adjust 'Set Processor Multiplier' to select the specific CPU multiplier you want to use.
- 2 Adjust 'FSB Frequency Override' to a FSB speed of your choice.
- 3 Press F10 to save settings and exit the BIOS.
- 4 Boot into Microsoft Windows\* XP.
- 5 Run stability testing software.
- 6 If PC maintains stability for at least a couple of hours, then the overclocking is a success. If you wish to overclock more, repeat from Step 1, and try different combinations of multiplier/FSB settings.
- 7 If PC freezes, or exhibits an error screen:
  - a Restart and re-enter the BIOS.
  - b Increase CPU voltage by adjusting the value of 'CPU VID'
  - c Adjust 'Front Side Bus Voltage Override' to a higher value.
  - d Repeat from Step 3

### Points to note:

- 1 Observe operating temperature of the processor.
- 2 Make sure processor cooling is sufficient.
- 3 If you hit repeated instability even after adjusting processor and FSB voltages to a maximum, you have hit the CPU and/or motherboard's limit. Do not try to push further or you will damage your hardware.

### Recommended stability testing software:

- 1 Stress Prime\* 2004 (<http://sp2004.fre3.com/>)
- 2 Memtest86\* (<http://www.memtest86.com/>)
- 3 Futuremark 3DMark06\* (<http://www.futuremark.com>)



## Legal Disclaimers

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Not all processors and motherboards are the same. One set of hardware may do better, or worse than another on an identical set. More voltage for the memory and CPU usually helps, but too much voltage can cause damage to the CPU. Intel does not encourage over-clocking. Doing so will void the warranty from Intel. This guide is provided to enthusiasts as a simple reference. Users must proceed with caution and at their own risk. Intel shall not be liable for the damage of hardware derived directly or indirectly after reading this guide.

<sup>1</sup>For more information on why Intel® Core™2 Duo processors are the world's best overall processors, please visit [www.intel.com/core2duo](http://www.intel.com/core2duo)

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